

## GBC847

### NPN EPITAXIAL PLANAR TRANSISTOR

#### Description

The GBC847 is designed for switching and AF amplifier application, suitable for automatic insertion in thick and thin-film circuits.

#### Package Dimensions

**SOT-23**

Marking:

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.10	G	1.90	REF.
B	2.40	2.80	H	1.00	1.30
C	1.40	1.60	K	0.10	0.20
D	0.35	0.50	J	0.40	-
E	0	0.10	L	0.85	1.15
F	0.45	0.55	M	0°	10°

#### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Ratings	Unit
Junction Temperature	T <sub>j</sub>	+150	°C
Storage Temperature	T <sub>stg</sub>	-55 ~ +150	°C
Collector to Base Voltage	V <sub>CB0</sub>	50	V
Collector to Emitter Voltage	V <sub>CEO</sub>	45	V
Emitter to Base Voltage	V <sub>EB0</sub>	6	V
Collector Current	I <sub>C</sub>	100	mA
Total Power Dissipation	P <sub>D</sub>	225	mW

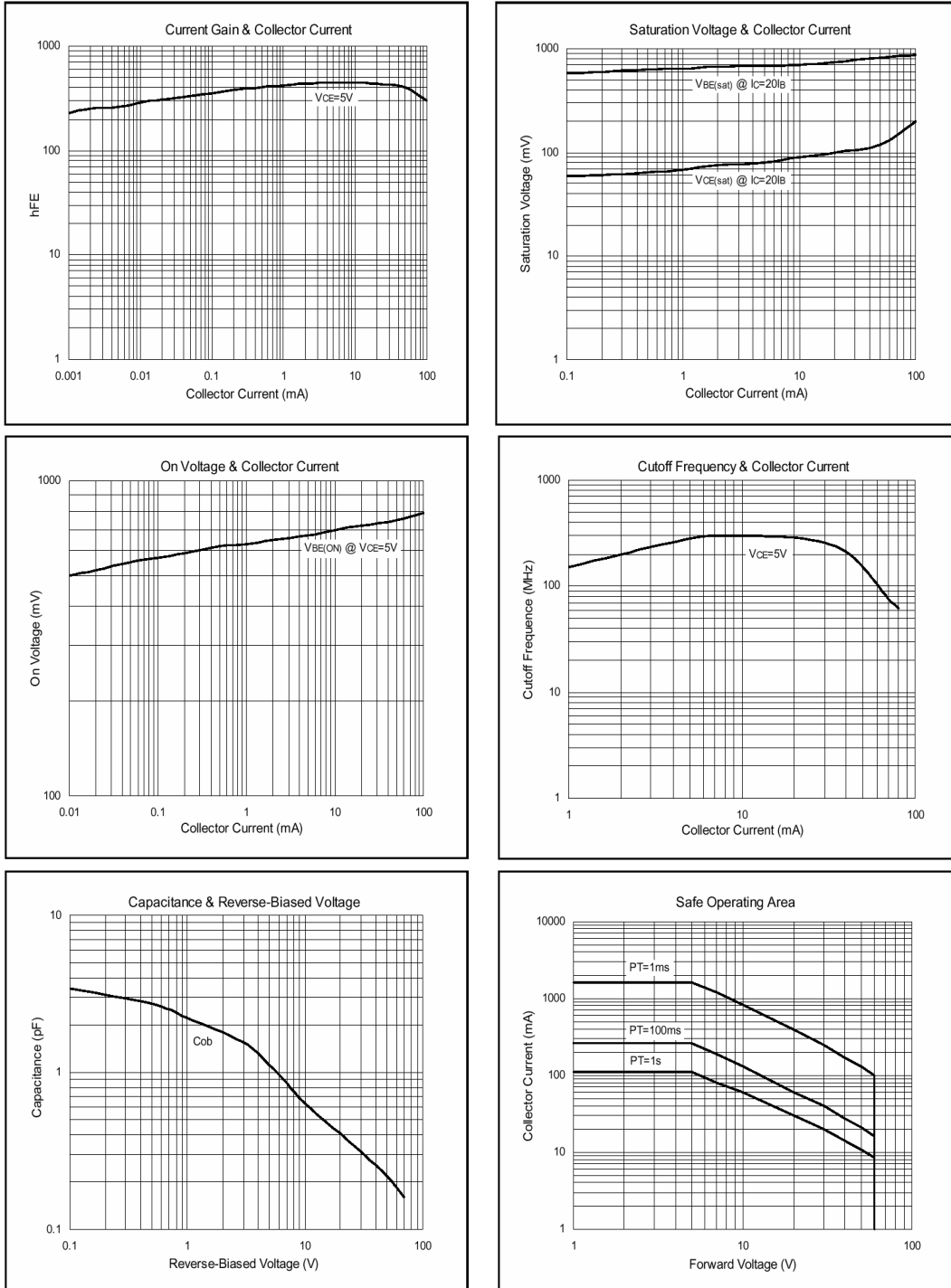
#### Characteristics at Ta = 25°C

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
V <sub>CB0</sub>	50	-	-	V	I <sub>C</sub> =100μA
V <sub>CEO</sub>	45	-	-	V	I <sub>C</sub> =1mA
V <sub>EB0</sub>	6	-	-	V	I <sub>E</sub> =10μA
I <sub>CB0</sub>	-	-	15	nA	V <sub>CB</sub> =30V
V <sub>CE(sat)1</sub>	-	90	250	mV	I <sub>C</sub> =10mA, I <sub>B</sub> =0.5mA
V <sub>CE(sat)2</sub>	-	200	600	mV	I <sub>C</sub> =100mA, I <sub>B</sub> =5mA
V <sub>BE(sat)1</sub>	-	700	-	mV	I <sub>C</sub> =10mA, I <sub>B</sub> =0.5mA
V <sub>BE(sat)2</sub>	-	900	-	mV	I <sub>C</sub> =100mA, I <sub>B</sub> =5mA
V <sub>BE(on)1</sub>	580	-	700	mV	V <sub>CE</sub> =5V, I <sub>C</sub> =2mA
V <sub>BE(on)2</sub>	-	-	770	mV	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA
h <sub>FE</sub>	110	-	800		V <sub>CE</sub> =5V, I <sub>C</sub> =2mA
f <sub>T</sub>	-	300	-	MHz	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA
C <sub>ob</sub>	-	3.5	6	pF	V <sub>CB</sub> =10V, f=1MHz, I <sub>E</sub> =0A

## Classification Of hFE

Rank	A	B	C
hFE	110-220	200-450	450-800

## Characteristics Curve



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